

Amendments to the Claims

This listing of the claims below will replace all prior versions and listing of claims in this application.

1. (Previously presented) A resorbable implant material for radiotherapy comprising:
 - (i) a resorbable base glass matrix which is biocompatible;
 - (ii) a radioactive isotope or combination of radioisotopes, wherein said radioisotope or combination of radioisotopes is incorporated or encapsulated directly and homogeneously into the base glass matrix during the process of manufacturing said base glass matrix, and wherein said base glass matrix does not need or require high energy particle irradiation to convert one or more stable isotopes into radioactive isotopes; and
 - (iii) a nitrogen-rich surface layer formed on the resorbable base glass matrix, the surface layer being of greater durability than the base glass matrix.
2. (Currently amended) The resorbable implant material of claim 4 36, wherein said resorbable base glass comprises a silicate, borate or phosphate based matrix.
3. (Currently amended) The resorbable implant material of claim 4 36, wherein said resorbable base glass matrix is a phosphate based matrix.
4. (Original) The resorbable implant material of claim 3, wherein said phosphate based matrix comprises phosphate in combination with calcium, zinc, iron, barium, sodium, strontium, magnesium, aluminum, gallium, indium, lithium, potassium, cesium, rubidium, or combinations thereof.
5. (Original) The resorbable implant of claim 3, wherein said phosphate based glass matrix comprises a calcium to phosphate ratio from about 0.33 to about 1.67.
6. (Currently amended) The resorbable implant material of claim 4 36, wherein the implant material comprises image enhancing agents suitable for MRI, other imaging agents, diagnostic agents, or combinations thereof.
7. (Original) The resorbable implant material of claim 6, wherein the image enhancing agent is gadolinium, iron or combinations thereof.

8. (Original) The resorbable implant material of claim 3, wherein at least part of said phosphate based matrix contains a borate or silicate.

9. (Currently amended) The resorbable implant material of claim 4 36, wherein the implant material contains selenium.

10. (Currently amended) The resorbable implant material of claim 4 36, wherein said nitrogen rich surface layer comprises up to about 15 molar % nitrogen.

11. (Currently amended) The resorbable implant material of claim 4 36, wherein said radioactive isotope or combination of radioisotopes is Y-90, In-111, Pd-103, P-32, Cs-131, Sm-153, Ho-166, Tc-99m, Yb-169, Au-198, Re-188, Re-186, Ir-192, Lu-177, Ba-140, Se-72, I-131, I-125, Sr-90, Dy-165, Er, Tl, Sr, Gd, Y-90/In-111, Y-90/Tc-99m, P-32/In-111, P-32/Tc-99m, Ho-166/In-111, Ho-166/Tc-99m, Sm-153/In-111, Sm-153/Tc-99m, or combinations thereof.

12. (Original) The resorbable implant material of Claim 11, wherein said radioactive isotope or combination of radioisotopes is present in said base glass matrix in an amount effective for radiation synovectomy of arthritis.

13. (Original) The resorbable implant material of Claim 11, wherein said radioactive or combination of radioisotopes is present in said base glass matrix in an amount effective for radiation therapy of a tumor.

14. (Currently amended) The resorbable implant material of claim 4 36, wherein said base glass matrix comprises up to 50 curies of total radioactivity from all isotopes.

15. (Currently amended) The resorbable implant material of claim 4 36, wherein the resorbable base glass matrix is a particulate, microsphere, porous microsphere, hollow microsphere, microcapsule, fiber, short fiber, small rod, particulate dispersed in biopolymers, particulate dispersed in bioresorbable sutures, particulate dispersed in biocompatible gels, particulate dispersed in other media, or combinations thereof.

16. (Currently amended) The resorbable implant material of claim 4 36, wherein said implant is a non-conductive implant.

17. (Original) The resorbable implant material of claim 16, wherein said non-conductive implant is radiographically detectable.

18. (Original) The resorbable implant material of claim 16, wherein said non-conductive implant is embedded in a non-conductive delivery vehicle.

19. (Previously presented) The resorbable implant material of claim 18, wherein said non-conductive delivery vehicle is a biopolymer, bioresorbable suture, injectable gel, tissue adhesive, other media, or combinations thereof.

20. (Original) The resorbable implant material of claim 19, wherein said biopolymer is poly-l-lactic acid in the molecular weight range of 30,000 to 500,000, poly-l-lactic acid co-polymers with polyglycolic acid, polydioxanone (PDS II), polyglycaprone 25 (Moncyl), polyglactin 910 (Vicryl), phenyletheretherketone (PEEK), polysulfone (PSU), polyurethane, polypropylene, silicone, polyethylene terephthalate (PET), polyphenylene oxide blends (PPO), polyphenylsulfone (PPSU), polyether sulfone (PES), polyphenylene sulfide (PPS), polyetherimide (PEI), liquid crystal polymer (LCP), or combinations thereof.

21.-35. (Canceled)

36. (Previously presented) A resorbable implant material for radiotherapy comprising:

(i) a resorbable base glass matrix which is biocompatible;
(ii) a radioactive isotope or combination of radioisotopes, wherein said radioisotope or combination of radioisotopes is incorporated or encapsulated directly and homogeneously into the base glass matrix; and

(iii) a nitrogen-rich surface layer formed on the resorbable base glass matrix, the surface layer being of greater durability than the base glass matrix.

37. (New) The method of claim 36, wherein the nitrogen rich surface layer substantially prevents premature release of said radioactive isotope or combination of radioisotopes for up to 10 half-lives of the longest lived radioisotope in said implant.